Chapter 21 – Environmental Protection

I. Introduction

Protection of environmental resources during the construction phase is vital. Often there are environmental commitments made that must be included in the construction phase of projects. Commitments may include installing erosion and sediment controls, avoiding sensitive areas, installing noise abatement measures and following permit conditions.

The purpose of this chapter is to provide basic guidance to inspectors on addressing environmental issues in the construction phase of projects.

II. References

UDOT Standard Specifications:
Section 01355 : Environmental Protection
Section 01571: Temporary Environmental Controls
Section 01574: Environmental Control Supervisor

UDOT Standard Drawings:
EN 1, Temporary Erosion Control (Check Dams)
EN 2, Temporary Erosion Control (Silt Fence)
EN 3, Temporary Erosion Control (Slope Drain and Temporary Berm)
EN 4, Temporary Erosion Control (Drop Inlet Barriers)
EN 5, Temporary Erosion Control (Pipe Inlet And Curb Inlet Barriers)
EN 6, Temporary Erosion Control (Sediment Trap and Stabilized Construction Entrance)
EN 7, Temporary Erosion Control (Straw Bale Barrier)

III. Responsibilities

A. General

- Prevent pollution of streams, lakes, ponds and reservoirs with sediment, fuels, oils, bitumens, chemicals or other harmful materials and pollution of the atmosphere from particulates and gaseous matter.
- Keep the project in environmental compliance. Obtain environmental clearances for off-site work activities.
- Use Best Management Practices to prevent hazardous material releases by segregating wastes, providing secondary containment and having spill kits and absorbents available for use.
- Implement all environmental mitigation commitments associated with the project.

B. Environmental Clearances

Verify or obtain the necessary environmental clearances before commencing project activities or when adding or selecting any ground- or resource-disturbing features such as material (gravel, borrow or waste) sites, equipment staging sites, office sites, water lines, holding ponds, etc. Environmental clearances include:

- Cultural and Paleontological
- Threatened and Endangered Species
- Wetlands
- Floodplains
- Prime, Unique and Important Farmland
- Water Resource Permits

C. Water Resource Permits

Obtain all permits required for the project and fully read all permits and associated special conditions before beginning construction activities. Water resource permits may include the following:

404 Wetland Permit - Necessary in order to discharge dredged or fill material into wetlands or other special aquatic sites. This permit is also needed for re-channelizing rivers, streams or creeks. The permit will outline mitigation and monitoring requirements and other special conditions that must be followed.

I. Stream Alteration Permit - **Necessary in order to modify or alter a natural stream channel. A natural stream channel is defined as a natural drainage feature with a defined bed and bank independent of flow. Modification or alteration activities may include bridge crossings, bank stabilization, scour mitigation, spur dike installation, etc. The permit will outline special conditions that must be followed during construction. This permit must be obtained prior to advertising the project for construction.**

Utah Pollutant Discharge Elimination System (UPDES) Permit - Necessary for all projects that will disturb more that 1 acre of surface area. This general permit authorizes the permittee to discharge storm water from a specified construction site as long as appropriate BMP's are installed.

Flood Plain Encroachment Permit - Necessary for all construction activities or alterations to existing structures within the base flood plain (100 year event). Alteration is defined as any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations.

D. Temporary Environmental Controls

Follow the Storm Water Pollution Prevention Plan prepared for the project. Ensure that all temporary environmental controls are installed prior to beginning construction activities. These controls may include:

Erosion Control BMP's – Check Dams, Silt Fence, Slope Drain, Temporary Berm. Drop Inlet Barrier, Pipe Inlet & Curb Inlet Barrier, Sediment Trap, Stabilized Construction Entrance and Straw Bale Barrier. Follow installation procedures outlined in the Standard Drawings.

Material Storage & Containment – Segregate wastes by type and provide adequate secondary containment for fuel storage and other chemical storage facilities. Have emergency spill kits and absorbents on hand in case small releases occur.

Maintenance of BMP's and Containment Systems – Maintain all erosion controls and containment systems until the project area is stabilized. Remove and dispose of sediment and other types of excess materials and wastes in approved locations and in accordance with state and federal laws.

E. Discoveries During Construction

Hazardous Materials - Immediately suspend work in the area and notify your supervisor if abnormal conditions are encountered or exposed during construction that indicates the presence of a hazardous material, toxic or hazardous waste. Abnormal conditions shall include, but not be limited to, the following: presence of barrels; buried storage tanks; above ground tanks; obnoxious odors; excessively hot earth; stained and discolored soils; smoke; unidentifiable powders, sludges, pellets; or any other condition that could be a possible indicator of hazardous material, toxic or hazardous waste. Treat all substances encountered with extreme caution.

Dispose of the hazardous material, toxic or hazardous waste under the requirements and regulations of the Utah State Department of Environmental Quality and United State Environmental Protection Agency.

Historical, Archeological or Paleontological Objects - Immediately suspend construction operations in the vicinity of the discovery if a suspected historic, archeological or paleontological item, feature, prehistoric dwelling sites or artifacts of historic or archeological significance are encountered. Notify your supervisor and the UDOT Region Archeologist of the nature and exact location of the findings. Protect all discovered objects.

Environmental Protection

SPEC	INSPECTION LEVEL	INSPECTION OBJECTIVE	INSPECTOR ACTIVITY
01554	Important	Ensure the safety of the traveling Public Ensure Traffic Control plan has been approved. Ensure devices and systems meet NCHRP-350 report requirements Ensure traffic sings conform to the MUTCD. Ensure Traffic Control Maintainer is Certified by the Department or American Traffic Safety Services Association (ATSSA) Flaggers have a current flagging certificate and must present proof of certification upon request by the Department.	Before erecting signs: Inspect condition of sign panels and supports and any allowable repairs that have been made. Perform and document nighttime inspection to verify that sign has proper illumination Traffic Control Maintainer has completed a daily record of traffic control activities using a form acceptable to the Resident Engineer Form C-110 Inspector has made a daily note in his/her diary on the traffic control and condition of roadway.

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